

Appl. No.: 10/707,642  
Amdt. Dated: 3/20/2006  
Reply to Office action of: 01/13/2006

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claim 1 (currently amended) An active safety circuit with loads protected by solid state relays, of the type wherein a load or a group of loads is fed through at least one solid state relay controlled in turn from a unit such as a microcontroller ~~prepared for provoking the capable of~~ opening of said relay, which is at least one, in case an anomaly occurs in said loads, comprising: a current breaking device inserted in the power supply network of said solid state relay, which is at least one, a grounded shunt line from one point of said supply network, placed between said ~~fuse~~ current breaking device and said solid state relay, and a safety switch controlled by said microcontroller and inserted in said grounded shunt line, characterized by comprising a set of at least one temperature detector associated to said solid state relay, which is at least one, and connected to said microcontroller such that the latter sequentially checks the state of said temperature detector to open, if an anomaly in temperature is produced, the corresponding solid state relay and, if the problem persists, to close said controlled safety switch so as to short-circuit to ground said power supply through said grounded shunt line, actuating said breaking device, thereby ~~provoking causing~~ the disconnection of said solid state relay and its corresponding set of associated loads, with respect to a power source.

Claim 2 (original) A safety circuit according to claim 1, characterized in that said solid state relay is an FET switch controlled by said microcontroller.

Claim 3 (original) A safety circuit according to claim 2, characterized in that said breaking device is a fuse, so that the passage of an overcurrent through it causes it to blow.

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Claim 4 (currently amended) A safety circuit according to claim 3, characterized in that each load has an FET protection switch associated to it, and each one of these said switches has a dedicated temperature detector.

Claim 5 (currently amended) A safety circuit according to claim 1, characterized in that various loads have a single associated FET protection switch, and the latter said single switch has a dedicated temperature detector.

Claim 6 (original) A safety circuit according to claim 1, characterized in that said controlled safety switch is an electronic power switch.

Claim 7 (original) A safety circuit according to claim 1, characterized in that said controlled safety switch is of the FET type.

Claim 8 (original) A safety circuit according to claim 1, characterized in that said controlled safety switch is a relay.